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CityZEN Strategy Plan # 2: Bornova Izmir Turkey

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‘The Bornova (Izmir) Roadshow’

4th April to 8th April 2016
The Bornova City Archive & Museum
& Yasar Universitesi

For more information on how to get involved with the Bornova (Izmir) Roadshow, and to contribute to a sustainable City Vision contact:

Dr. Ilker Kahraman, Yasar Universitesi (ilker.kahraman@yasar.edu.tr)
Izmir Contact.

Dr Craig L. Martin, Delft University of Technology (c.l.martin@tudelft.nl)
Roadshow Coordinator

See link: <http://www.cityzen-smartcity.eu>

CITYZEN INVOLVEMENT

The goal is to **motivate** and **empower end-users** to a long term energy saving attitude via:

- serious games
- an energy savings challenge
- monitoring their own energy
- retrofitting houses
- usage of district heat and cold sources
- using an electrical car to store energy
- using home batteries to increase self consumption of solar power

• Roadshow

>> 1. THE ROADSHOW

BACKGROUND

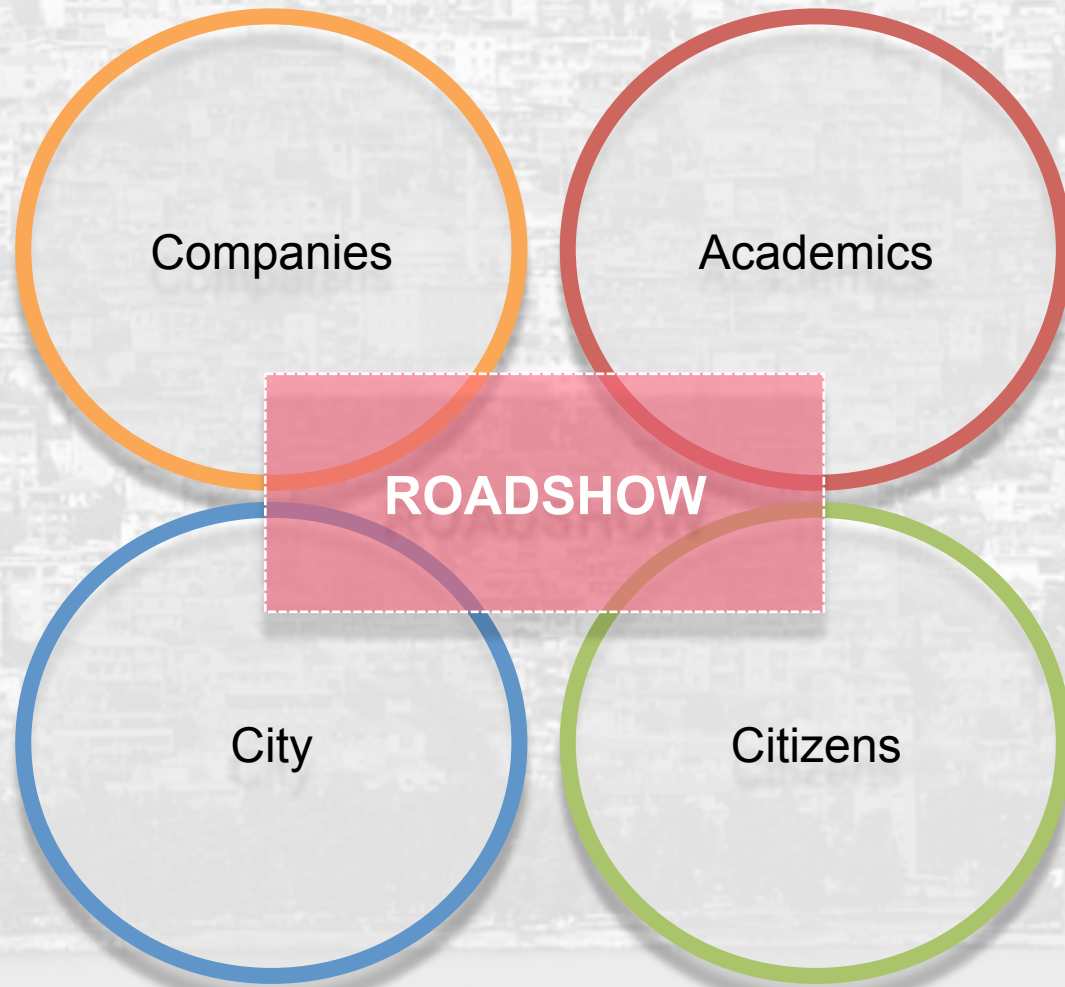
- Context for roadshow:
The Trias Energetica



>> 1. THE ROADSHOW

BACKGROUND

- Context for roadshow:



>> 1. THE ROADSHOW

THE 'ROADIES':

- Travelling with the Roadshow is an experienced team of internationally renowned sustainability experts, whose specialisms will combine with multidisciplinary stakeholder groups and students from each hosting city.



Prof. Greg Keefe

Workshop Content:
'Future Cities & Their Neighbourhoods'
(Workshop 1)
- spatial & social synergies



Dr Craig L. Martin

Workshop Content:
SWAT Studio (Pre-RS
Analysis) & Roadshow
Methodology



Dr Leen Peeters

Workshop Content:
Tradeshow / 'FUTURE
TECHNOLOGIES' Lecture



Ir. Siebe Broersma

Workshop Content:
'The City-zen Method'
(Workshop 2)
- energy synergies



Prof. Andy van den Dobbelsteen

Workshop Content:
'The City-zen Method'
(Workshop 2)
- energy synergies



Dr Han Vandevyvere

Workshop Content:
Mini-Masterclass 1 'The Link
between People & Technology'



Dr Riccardo Pulselli

Workshop Content:
Mini-Masterclass 2 - 'Carbon
Accounting Explained'

>> 1. THE ROADSHOW

BACKGROUND

- Roadshow activities & events over the 5 Day programme include:

Energy Mapping

Design workshops

Mini-Masterclasses

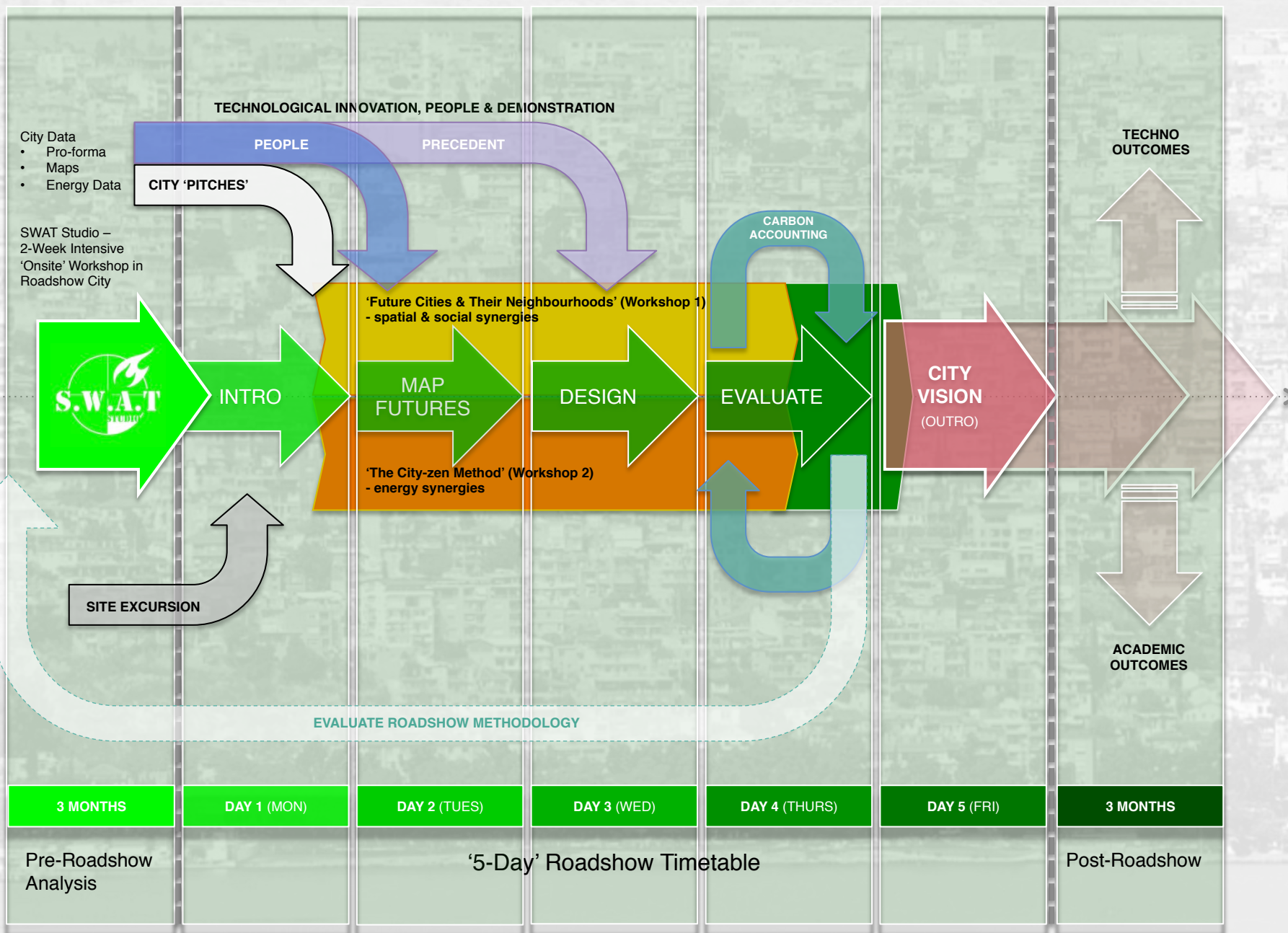
Future Innovation Technology lectures

Tradeshows

Carbon Accounting

Serious Gaming

ITS NOT A COMMUNITY CONSULTATION SESSION!





1. THE ROADSHOW – DAILY ACTIVITIES





1. THE ROADSHOW – DAILY ACTIVITIES





THE ROADSHOW – DAILY ACTIVITIES

- Impactful Academic, Technical & Societal Outcomes
- Final Presentation to a High-ranking Audience
- Methodologies for design collaborations & working processes
- A City agenda, not a blueprint.
- A 'City Vision', facilitated by the Roadshow, but holistically 'owned' by the City and its citizens.



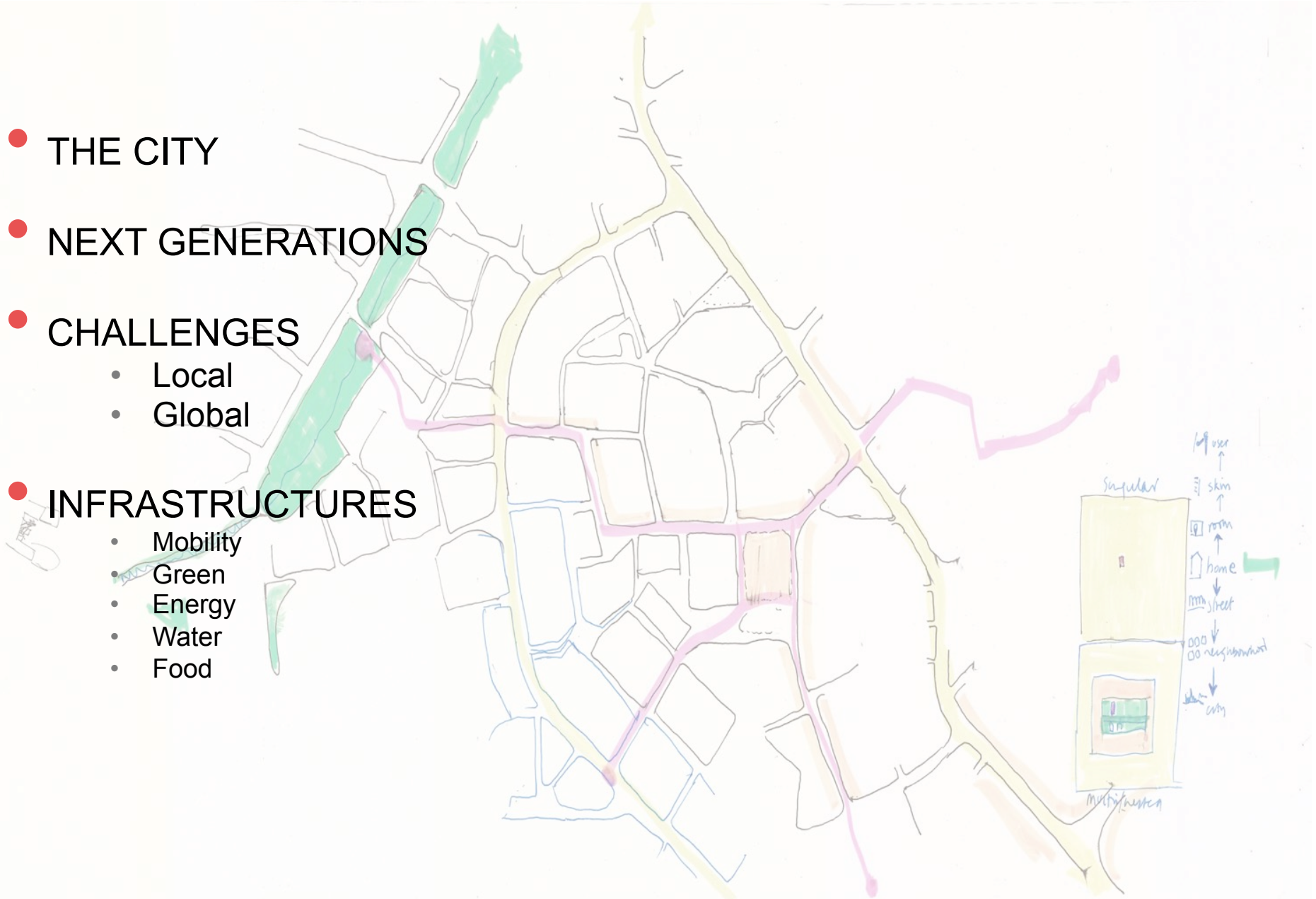
CITY VISION

Future Cities & Their Neighbourhoods' (Workshop 1)

- spatial & social synergies**

>> THE CHALLENGE

- THE CITY
- NEXT GENERATIONS
- CHALLENGES
 - Local
 - Global
- INFRASTRUCTURES
 - Mobility
 - Green
 - Energy
 - Water
 - Food





Dangerous crossroads



Unused pedestrian routes



Devoid of pedestrian routes



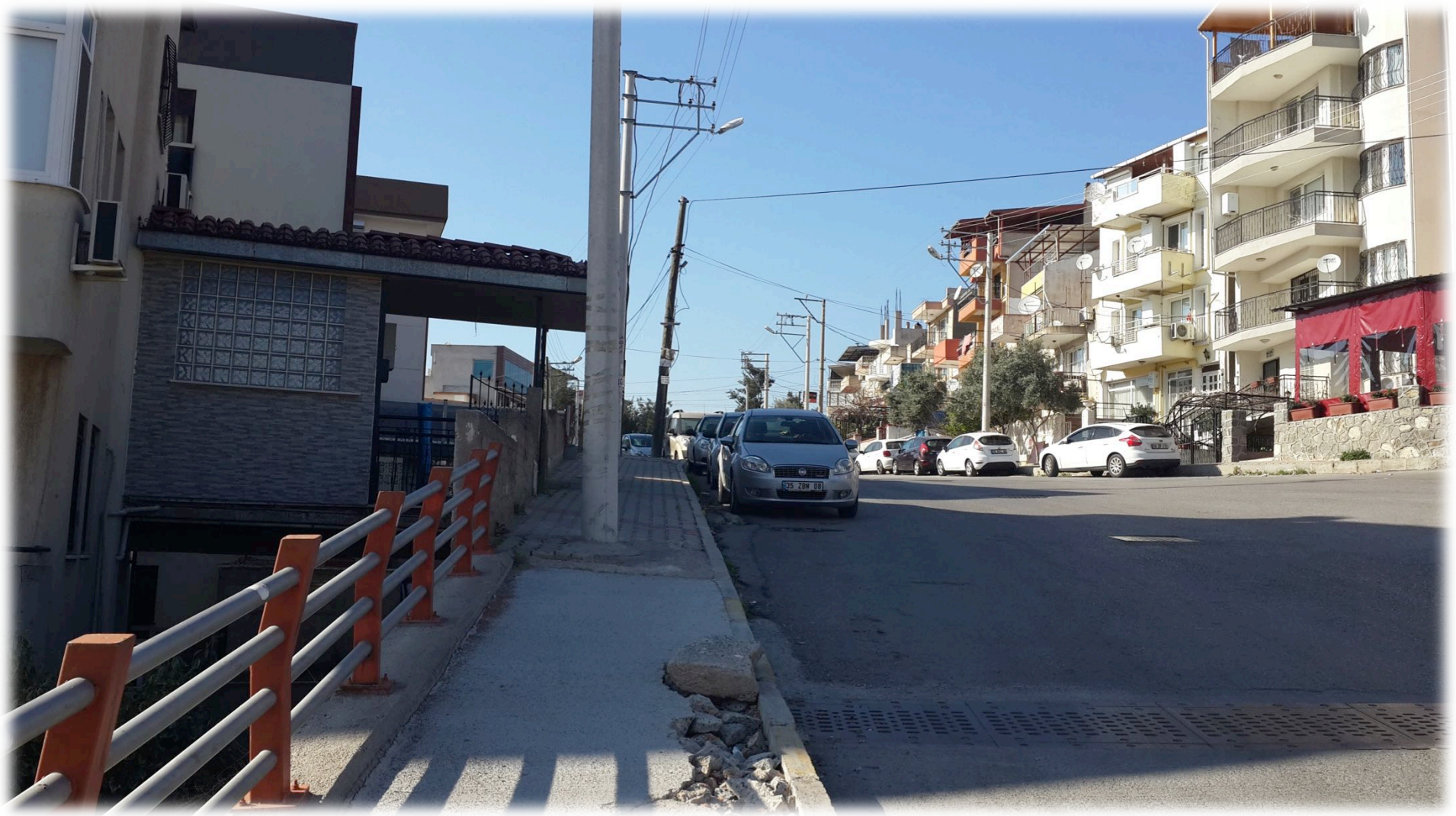
Ineffective pedestrian routes



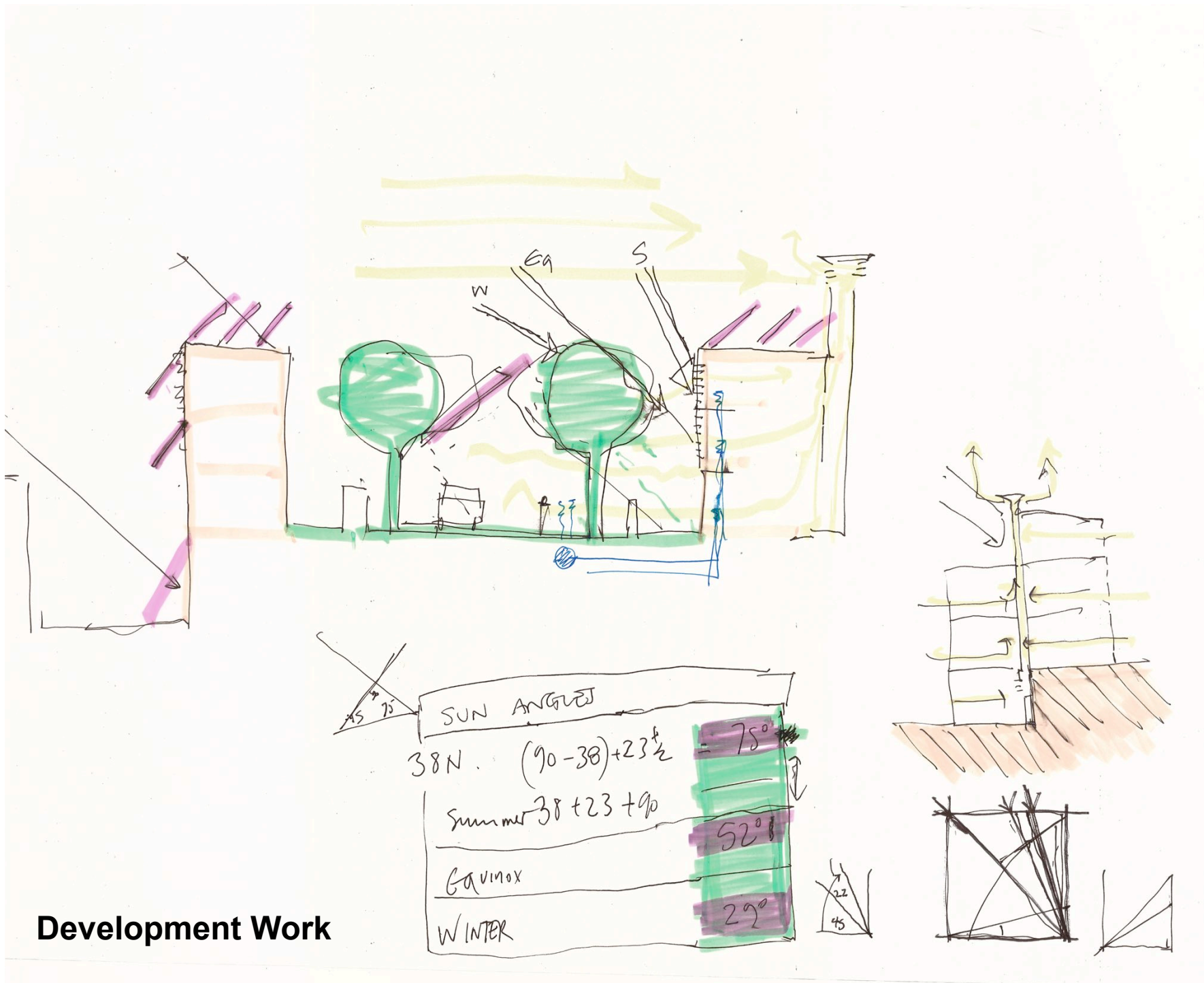
No green in family park



Unused potential of green areas



The pedestrian is disadvantaged



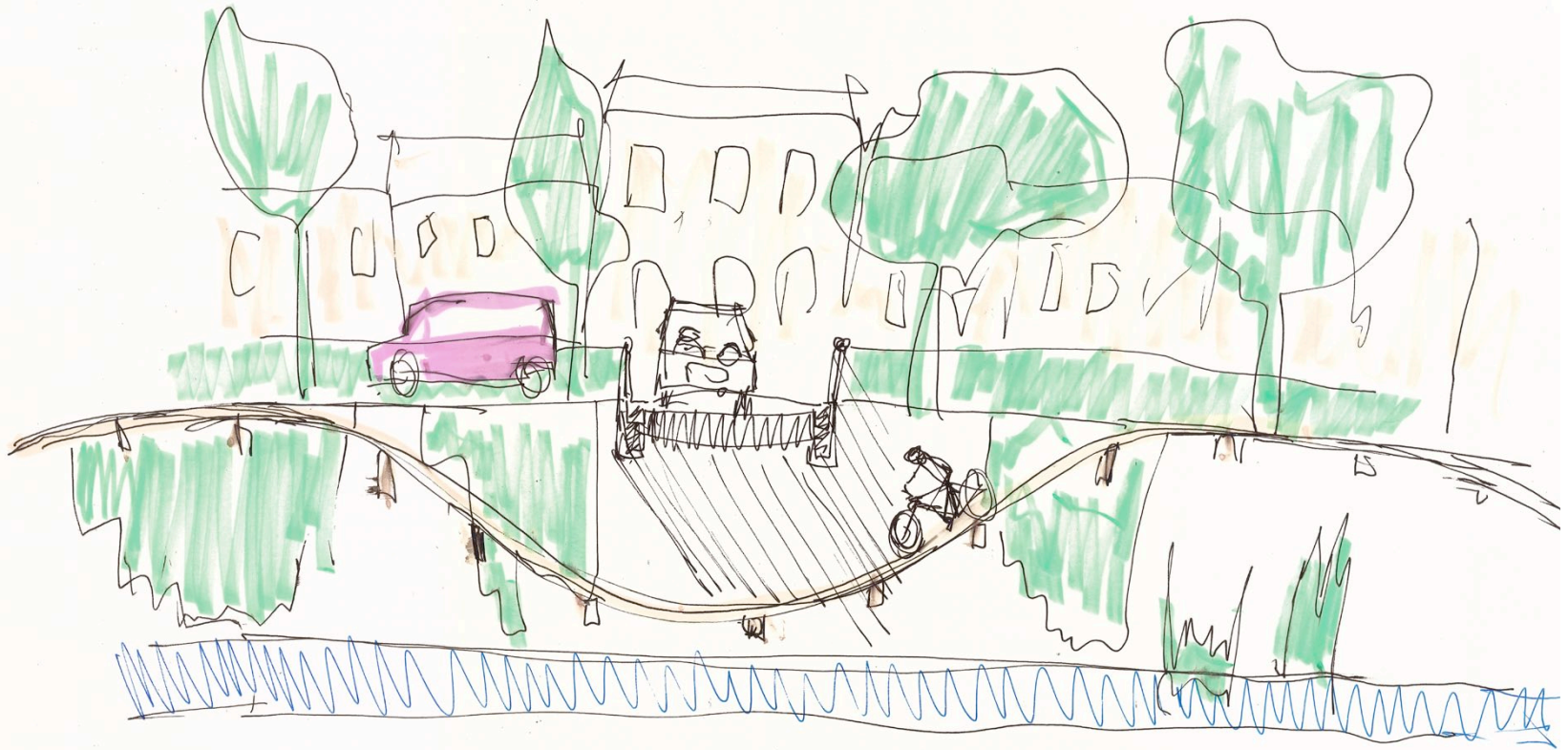
Development Work



Development Work



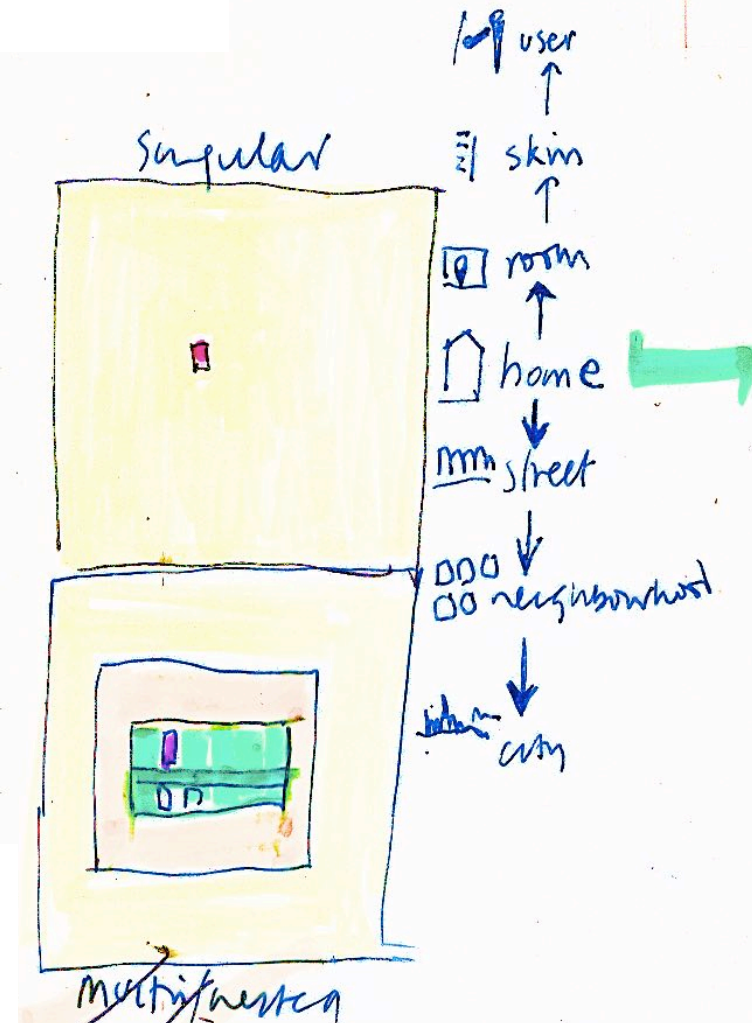
Development Work



Development Work



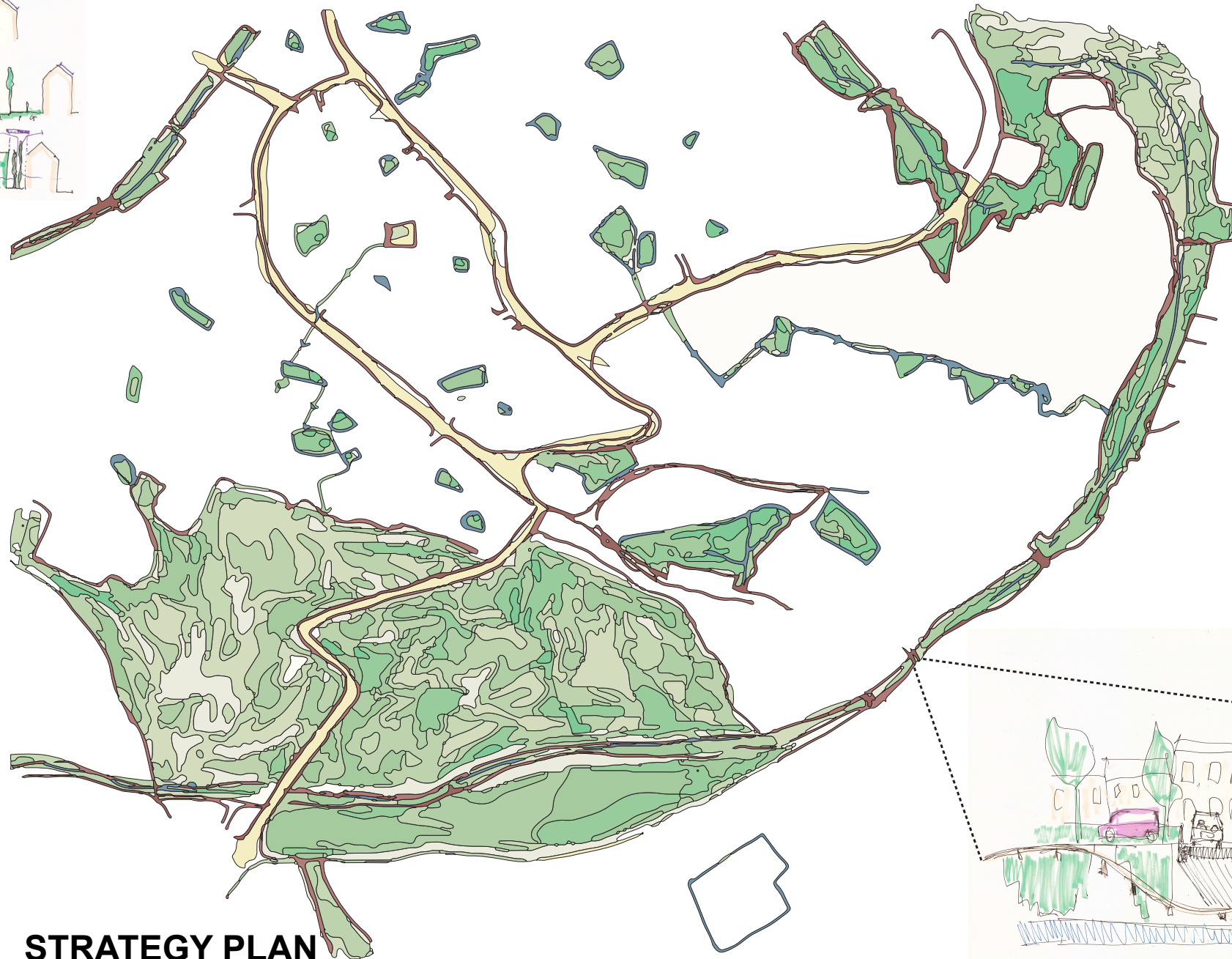
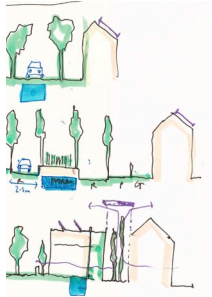
- Urban design happens at several scales,
- Key is at the moment infrastructure.
- Infrastructure comprise Policy and Form creation at various scales.
-
- A main aim is to create a series of Policies that embody good behavior that leads to form within the existing context.



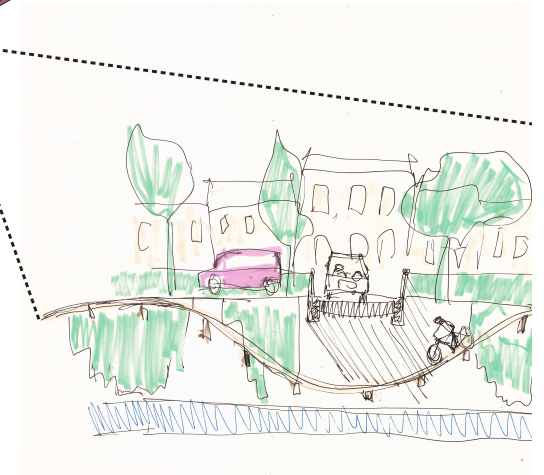
Urban strategy

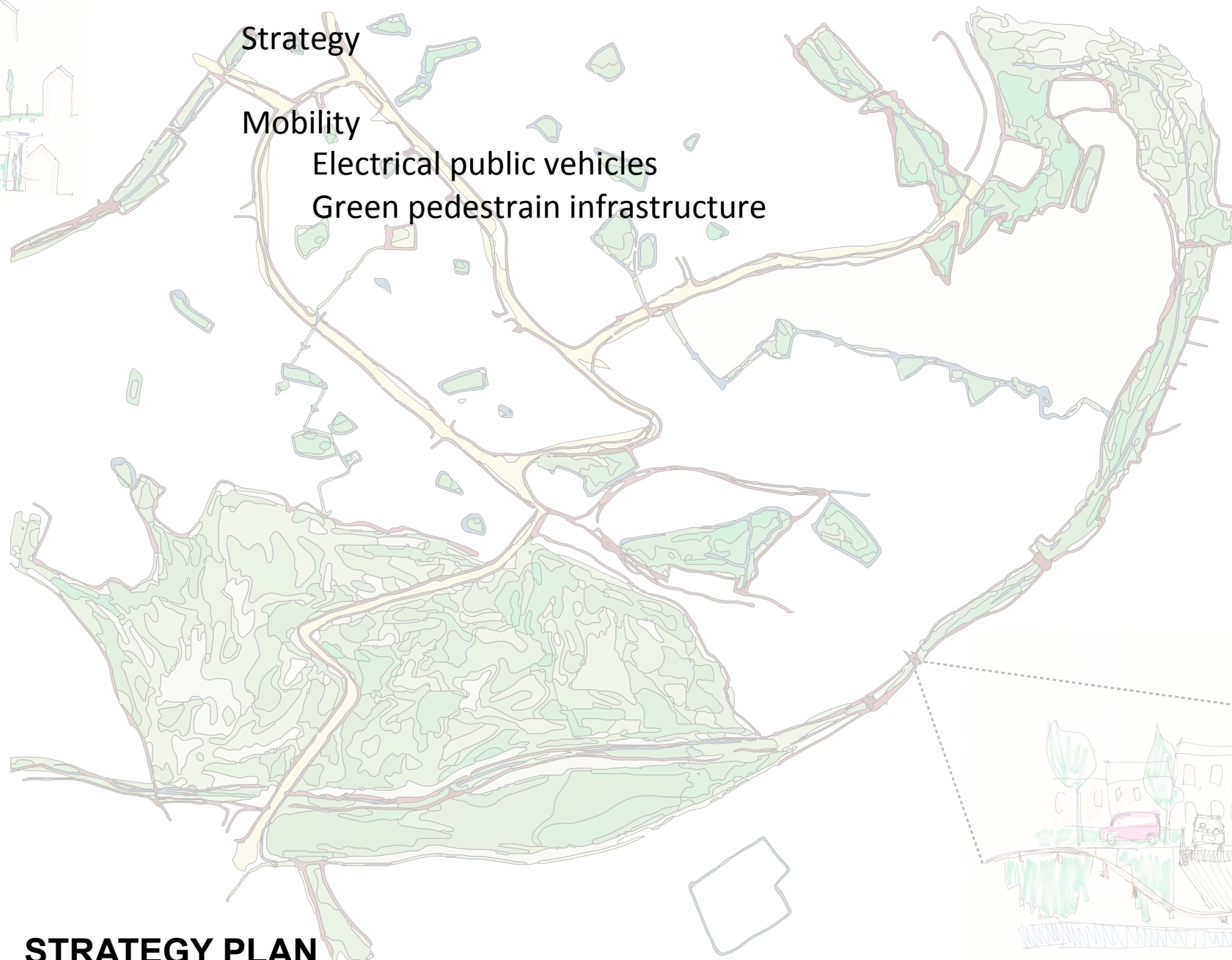
>> THE AIMS

- RAPID CARBON DECENT
- 5 KEY AREAS BEING:
 - A. MOBILITY
 - B. ENERGY USE
 - C. WATER
 - D. FOOD
 - E. MATERIALS
- Concrete responsible for Climate Change, Careful management of its use is critical.



STRATEGY PLAN





STRATEGY PLAN



















>> CITY VISION



Green Block Facade



CITY VISION

‘Illicit planning gain’ - Energy Amnesty

Illegal development is impossible to stop...

So work with it by getting residents to build sustainable infrastructure for the city.

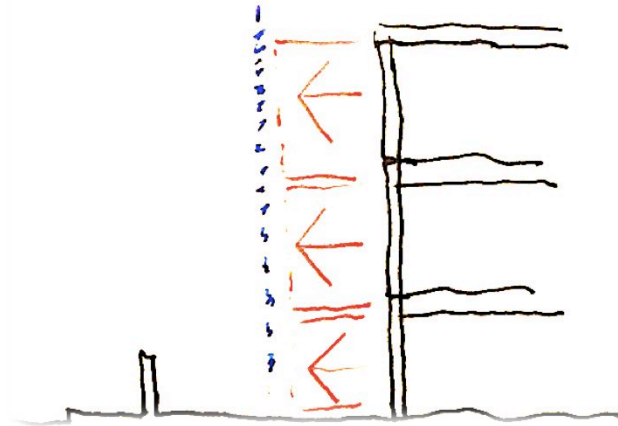
Compliance granted to people who create common benefits.

>> CITY VISION

Benign Facades.

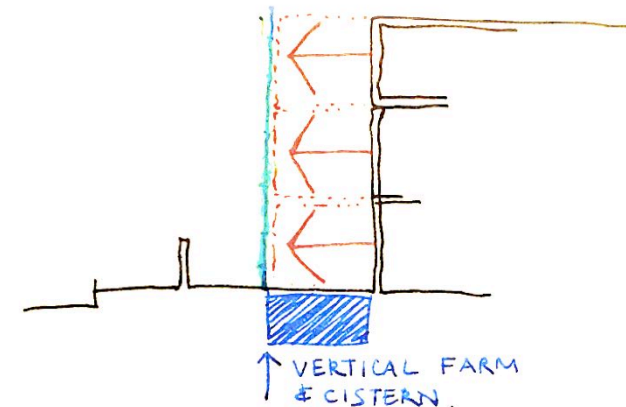
Houses can be extended forwards towards the street by 3m if.

1. Residents build a passively-cooled street façade



2. Residents develop a vertical farm façade

The space between the existing house and the façade, can then be occupied by the householder.

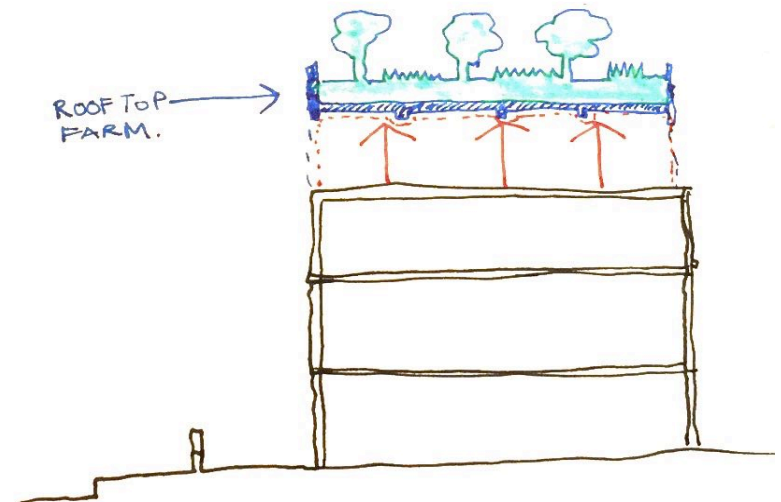
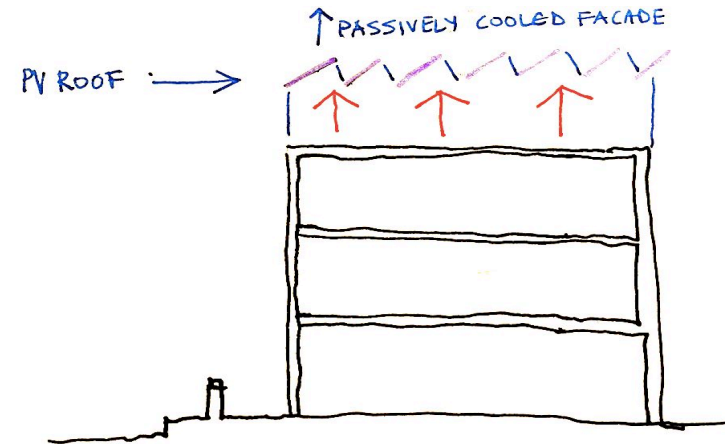
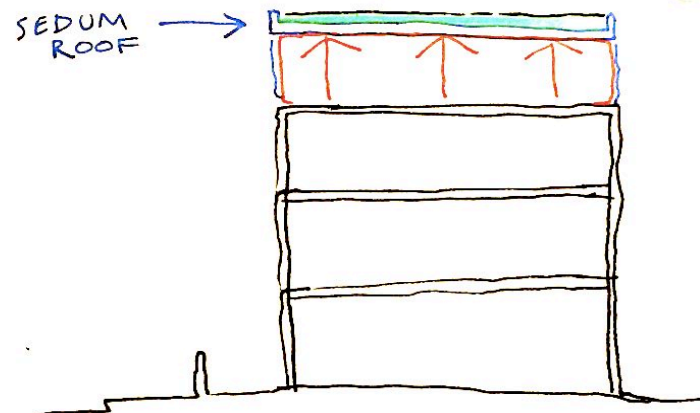


Super-roof

An extra 3 metre height can be gained by:

- 1 Building a Photovoltaic roof
- 2 Installing a sedum or turf roof
- 3 Creating a roof-top urban farm

The space under this new surface can then be occupied by the householder

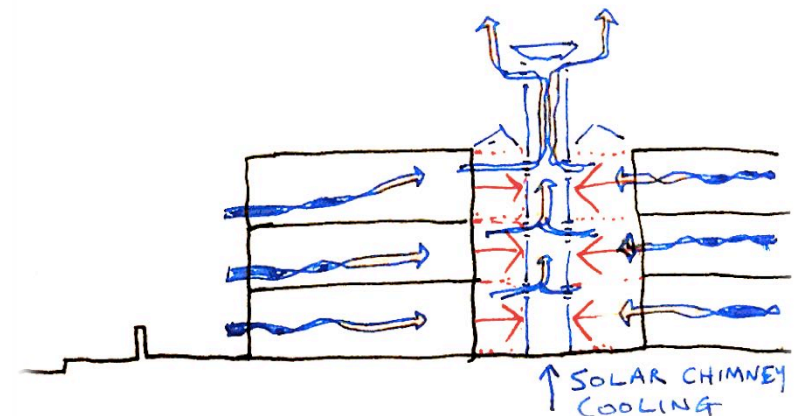
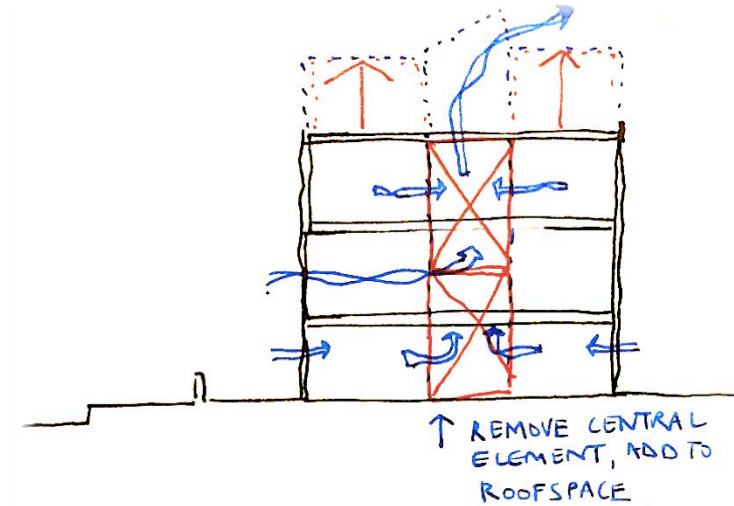
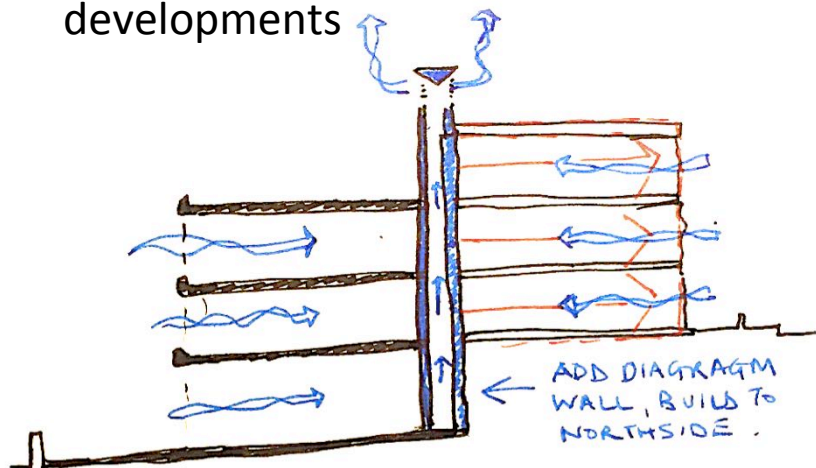


>> CITY VISION

Ventilation voids

Areas that encourage stack or wind assisted ventilation:

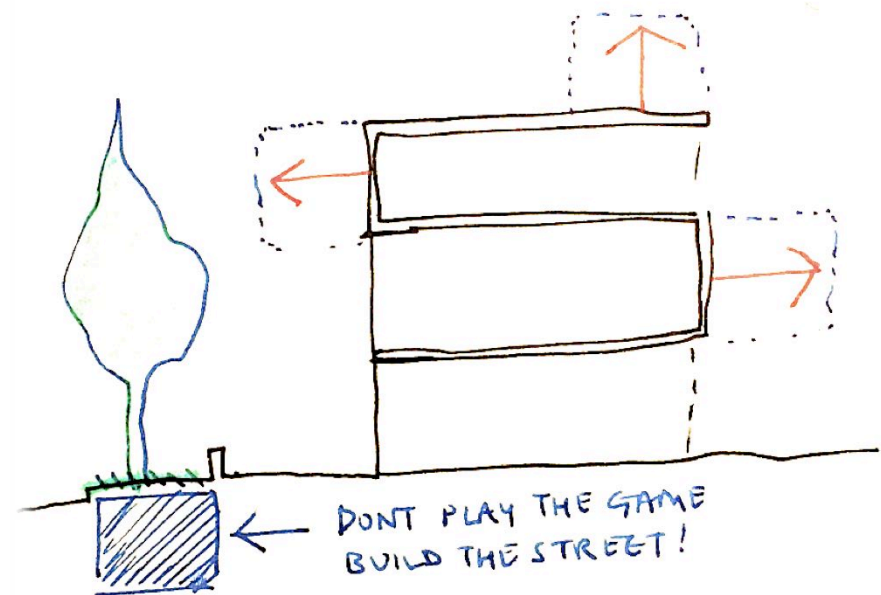
- 1 Can be exempt from planning volumes
- 2 Can be used as occupiable space
- 3 Can be used as structure for back-to-back developments



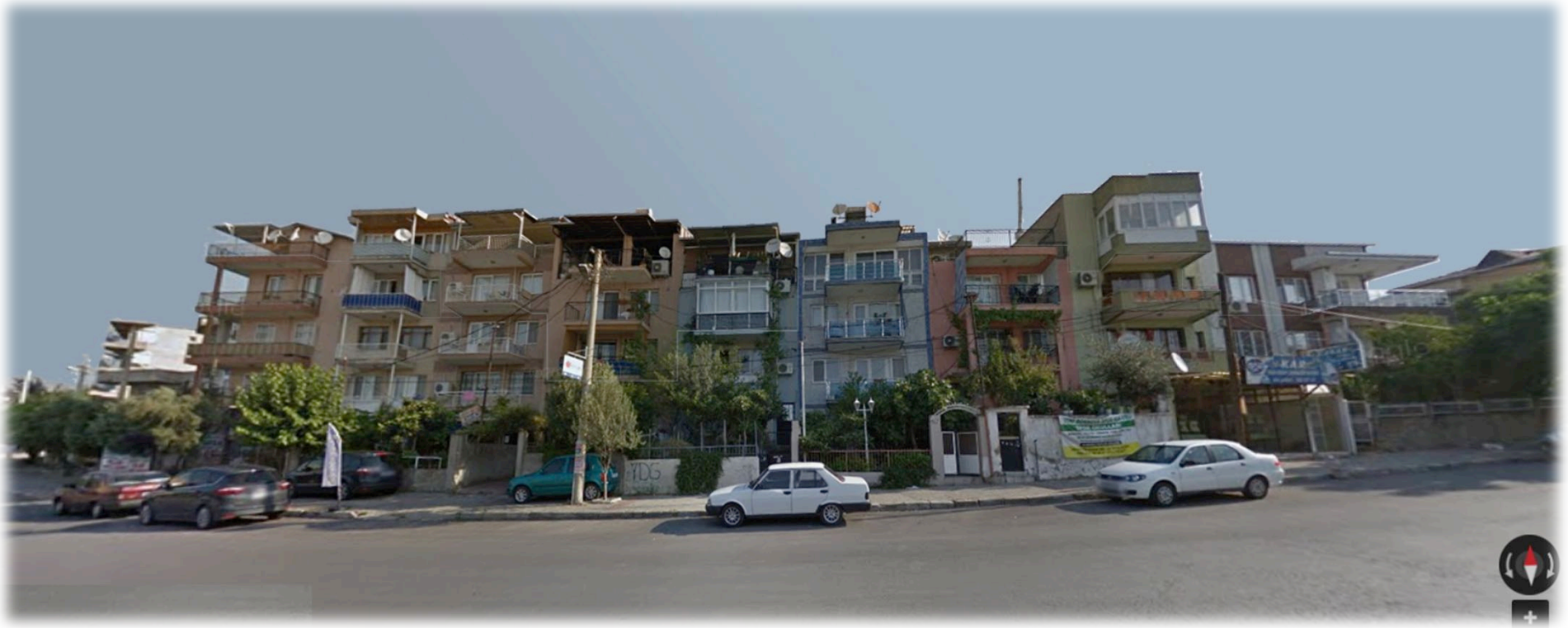
Illicit gains.

Constructions that do not meet the above, can gain approval through:

- 1 Street canopy development (street trees)
- 2 Creating Urban farming infrastructure
- 3 Greening by perforating the street surface
- 4 Cistern construction for grey/rain water storage.



>> CITY VISION



Block façade existing

>> CITY VISION



Block façade Legal

>> CITY VISION



Green Block Facade

Land swap – green infrastructure

Small vacant land parcels in the city should be swapped with City-owned land elsewhere, more suitable for development.

These small land parcels should be developed into green infrastructure:
These 'Pocket parks' will include

1. Water storage:
2. Public space
3. Play space
4. Green refuge
5. Transpirational anti-heat island – super cooler
6. Every resident should be within 200m of a pocket park



Land-swap Pocket park infrastructure

